ABSTRACT OF THE DISCLOSURE

A system and method for reading register contents from a computational pipeline having a plurality of computational units. The system includes a readback bus and a read control unit. The readback bus has a plurality of logic units coupled in a series. Each logic unit couples to a corresponding one of the computational units. The read control unit couples to each of the computational units through a corresponding load line, and is configured to assert a load signal on one of the load lines in response to a register read request. Each of the computational units is configured to transmit a data value from a selected register onto the readback bus in response to detecting an assertion of the load signal on its corresponding load line.